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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,790	04/02/2004	Yutaka Kanamaru	1422-0416PUS2	9926
2292	7590	08-05/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			RODEE, CHRISTOPHER D	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/815,790	Applicant(s) KANAMARU ET AL.	
	Examiner Christopher RoDee	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2004 and 11 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/532955.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/30/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

Applicants are asked to update the status of the parent application on page 1 of the specification.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 17 and 18 specify the manner in which the hybrid resin is produced. In these claims, the hybrid resin is "obtained by mixing a mixture comprising raw material monomers for a resin and raw material monomers for polycondensation addition polymerization resin, and carrying out two polymerization reactions in one reaction vessel." Basis for this amendment appears to be present on page 9, beginning at line 21. In this passage the specification requires the presence of a polymerization initiator as a component of the polymerization reaction. The claims as presented include within their scope the production of resins which polymerize without the presence of a polymerization initiator, that is, they self initiate. There is no disclosure in the

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specification of resins that would function in this manner in the process specified.

Consequently, the claims are broader than supported by the disclosure. New matter is present.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida *et al.* in US Patent 4,863,824 in view of Matsunaga *et al.* in US Patent 5,976,752.

Uchida discloses and exemplifies toners containing polyester resins. Exemplified toners 2, 3, 5, 7, and 9 (see Tables 2 and 3) present a mixture of resins having glass transition temperatures, softening points, and percentage of chloroform insolubles meeting the requirements of the rejected claims. For example, toner 2 has, as resin components, 70 pbw of a first polymer with softening point of 130 °C, a Tg of 66 °C, and 6.2 weight % of chloroform insolubles, and 30 pbw a second polymer with softening point of 95 °C, a Tg of 62 °C, and zero weight % of chloroform insolubles. Also note toner 9, which has as resin components, 40 pbw of a first polymer with softening point of 140 °C, a Tg of 62 °C, and 20.3 weight % of chloroform insolubles, and 60 pbw a second polymer with softening point of 118 °C, a Tg of 64 °C, and zero weight % of chloroform insolubles.

The reference states that low-molecular weight polyolefins can be added to the toner such as those with softening points of from 70 to 150 °C. These polyolefins improve grindability and reduce offset (col. 7, l. 33-44). In the examples the wax is added in an amount of 5 parts by weight based on 100 parts of the polyesters. The reference does not disclose the specific wax of the instant claims.

Matsunaga discloses the usefulness of incorporating a wax having a DSC heat absorption peak in the range of 70 to 160 °C, preferably 80 to 135 °C (col. 16, l. 12-37), to provide anti-offset properties, low temperature fixability, and antiblocking performance. The DSC peak corresponds to the melting point of the wax. Specifically identified waxes include carnauba wax (col. 16, l. 43). Carnauba is a preferred wax according to the instant invention (spec. Examples 3, 8, and 11) and, thus, it appears that to have the claimed melting point (spec. p. 28, l. 6-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the disclosed wax of Matsunaga in the invention of Uchida because Matsunaga teaches that waxes according to that invention provide anti-offset properties, low temperature fixability, and antiblocking performance and these characteristics are desired by the primary reference for the toner. Clearly the artisan skilled in the art would have found it obvious to use those materials shown by the art as effective for solving common problems.

Applicants have submitted an executed declaration from Yutaka Kanamaru (dated 4/28/04) that reproduces Example 5 of Uchida, which has a specific combination of polyesters with a polyolefin wax as components of the toner. Applicants also use the same polyesters with other waxes within and outside the scope of the invention. The results are summarized in Table C (dec. p. 8). These tests correspond to the same tests

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presented in the instant specification, except that the durability test was modified in order to conduct the experiments in a specified timeframe (see dec. p. 6).

The Examiner has carefully reviewed the data in light of the new claims and a further review of the references. The evidence shows that the lowest fixing temperature is lower for the inventive toners as compared to the prior art. This result is not seen as unexpected because the waxes used in the inventive examples each have melting points lower than that of the comparative. A lower wax melting point would suggest a lower fixing temperature to the artisan because the wax component of the toner would start to melt (i.e., fix) at a lower temperature. This result is not seen as unexpected.

The hot-offset temperature is the same for the comparative toner (i.e., Toner 2) and the inventive toner. No difference in result exists for this parameter.

The comparative toner also has the same blocking resistance value as the inventive toners (i.e., Toners 3, 4, and 6). Consequently, no difference is present between the prior art and the instant invention.

The Examiner notes that a difference in durability is present between the prior art example and the inventive toners. The test used to determine durability is different from that used in the instant specification (see p. 24, last line through page 25). The specification determines the durability characteristics of the toner based on the actual characteristics of printed images using the toner while the recently filed declaration determines durability based on carbon content on the surface of carrier. The two tests, although similarly labeled, are not comparable because they test different features by different values. Applicants state that the increased carbon content on the carrier (declaration test) is pertinent because it shows that the carrier is becoming coated with components of the toner. According to applicants, this will reduce the effectiveness of the carrier by reducing its triboelectric characteristics.

The Examiner has carefully considered declarant's statements and the evidence but cannot agree that the evidence shows an unexpected result over the prior art. The evidence relied up should establish "that the differences in results are in fact unexpected and unobvious and of both statistical and practical significance." *Ex parte Gelles*, 22 USPQ2d 1318, 1319 (Bd. Pat. App. & Inter. 1992). There is no evidence in the record to show that the durability values obtained in the declaration result in a difference that is or practical significance or statistically significant. Applicants and declarant have not shown that the carbon content of the carrier has any effect on the images obtained through the use of the toner. For example, there is no evidence to indicate that a carbon content on the carrier of 0.25 % gives a practical difference in copying as compared to the inventive toners having carbon contents of 0.07%, 0.08 % and 0.09 %. Because the significance of the data is in question and applicants have not demonstrated that the test employed affects the imaging characteristics or any other significant characteristics of the toner, the evidence is not persuasive. Furthermore, because the durability test is different in the declaration and the specification, the data in the declaration (e.g., the comparative of Uchida) cannot be used to compare against the durability data present in the specification.

The evidence of record in the declaration is also not commensurate in scope with the claims because the data presents only a single composition of polyester resins at a 60/40 ratio while the claims permit a much broader ratio of these resins. For example, in claim 11, any ratio of the polyester resins as permitted. As required by the Courts, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range. *In re Clemens*, 206 USPQ 289 (CCPA 1980). The narrow showing is not commensurate in scope with the claims.

For all these reasons, the evidence is not persuasive to overcome this rejection.

Claims 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki *et al.* in US Patent 5,723,246 in view of Matsunaga *et al.* in US Patent 5,976,752.

Aoki discloses a toner comprising a binder resin having the following three resins (A) to (C): resin (A) having a softening point of 120 °C or more and 170 °C or less, a glass transition temperature of 58 °C or more and less than 75 °C, and a weight percentage of components insoluble to chloroform at 25 °C of 5% by weight or more and 50% by weight or less; resin (B) having a softening point of 90 °C or more and 120 °C or less, a glass transition temperature of 58 °C or more and less than 75 °C, and a weight percentage of components insoluble to chloroform at 25 °C of less than 5% by weight; and resin (C) having a softening point of 80 °C or more and less than 110 °C, a glass transition temperature of 45 °C or more and less than 58 °C, and a weight percentage of components insoluble to chloroform at 25 °C of less than 5% by weight (Abstract; col. 4, l. 44-60).

The reference is particularly interested in obtaining low-temperature fixing ability, offset resistance, and blocking resistance (col. 3, l. 36-39). Waxes, such as polyolefins, are suggested for use in the toner to acts as offset inhibitors (col. 12, l. 40-56) and are present in an amount of from 1 to 5 parts per 100 parts of the binder resin (col. 12, l. 40-42). The reference states that waxes have improved compatibility with the specific binder resin of the invention (col. 12, l. 51-56).

Note the proportions of the resin components in Table 4 and the guidance to those proportions in column 6. Resins (A), (B), and (C) are independently chosen and include condensation polymerization resins as well as hybrid resins where the hybrid resin is formed in one reaction vessel from monomers for a condensation polymerization reaction and an addition polymerization reaction (col. 6, l. 64 – col. 7, l. 12).

Polymerization initiators are used in this process (col. 9, l. 57-67). Useful condensation



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resins include polyesters (col. 11, l. 25; Table 1). The "consisting essentially of" language in the instant claims does not exclude the present of additional resins from Aoki because there is no indication in the record that these additional resins would affect the basic and novel characteristics of the instant claims. If an applicant contends that additional materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional components would materially change the characteristics of applicant's invention. *In re De Lajarte*, 143 USPQ 256 (CCPA 1964). See MPEP 2111.03.

The reference does not disclose the claimed wax, but Matsunaga discloses the usefulness of incorporating a wax having a DSC heat absorption peak in the range of 70 to 160 °C, preferably 80 to 135 °C (col. 16, l. 12-37), to provide anti-offset properties, low temperature fixability, and antiblocking performance. The DSC peak corresponds to the melting point of the wax. Specifically identified waxes include carnauba wax (col. 16, l. 43). Carnauba is a preferred wax according to the instant invention and, thus, it appears that to have the claimed melting point, as discussed above.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the disclosed wax of Matsunaga in the invention of Aoki because Matsunaga teaches that waxes according to that invention provide anti-offset properties, low temperature fixability, and antiblocking performance and these characteristics are desired by the primary reference. Clearly the artisan skilled in the art would have found it obvious to use those materials shown by the art as effective for solving common problems. The artisan would also have found it obvious to use combinations of condensation resins, such as polyesters, with hybrid resins because the reference teaches that both are useable independently for the resins of that invention and noting the resin combinations in the Examples (see Tables 1-3).

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No evidence appears to be of record that reproduces the examples of Aoki. As apparent in the reference's examples, the specific formulations of the resins are different from those of Uchida. Aoki uses a specific combination of monomeric components in Tables 1 and 2 that are different from those of Uchida. Resins with different properties are produced noting the softening point and Tg of the respective references' resins. There is no indication that toners produced from these resins are sufficiently close to those of Uchida to permit the applicants to use Uchida's prior art example as a showing for Aoki. Showing unexpected results over one of two equally close prior art references will not rebut prima facie obviousness unless the teachings of the prior art references are sufficiently similar to each other that the testing of one showing unexpected results would provide the same information as to the other. *In re Johnson*, 223 USPQ 1260, 1264 (Fed. Cir. 1984).

The rejection is seen as proper for the claims as currently presented.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cdr  
4 August 2004



CHRISTOPHER RODEE  
PRIMARY EXAMINER